

IN THE CLAIMS

1. (Currently Amended) A picture synthesizing apparatus comprising:

an image pickup means that is disposed in attached to a ear vehicle disposed on a road surface and that is adapted to obtain an original image of a surrounding object viewed from a viewpoint of the image pickup means;

a viewpoint change image synthesizing means for changing a viewpoint of an that is adapted to produce a synthesized image, in which the surrounding object is viewed from a virtual viewpoint different from the viewpoint of the image pickup means along a direction substantially vertical to the road surface, from the original image obtained by said image pickup means and synthesizing the image and is adapted to draw the synthesized image on a plane corresponding to the road surface;

a vehicle ear locus line generation means for generating that is adapted to generate at least one of a locus line of said vehicle placed at an arbitrary height from the road surface of said ear and a vertical line extending normal to the road surface; and

a vehicle ear locus line drawing means for drawing that is adapted to draw the locus or vertical line generated by said vehicle ear locus line generation means on the synthesized image synthesized-produced by said viewpoint change image synthesizing means by projecting the locus or vertical line viewed from the viewpoint of the image pickup means onto the road surface and again projecting the projected locus or vertical line viewed from the virtual viewpoint onto the plane corresponding to the road surface.

2. (Currently amended) The picture synthesizing apparatus according to claim 1 wherein said vehicle ear locus line generation means comprises

three-dimensional locus line generation means, road surface projection means, and synthesized image projection means.

3. (Currently amended) The picture synthesizing apparatus according to claim 1 wherein said vehicle ear locus line generation means generates a locus line in a case in which said car linearly advances.

4. (Currently amended) The picture synthesizing apparatus according to claim 1, further comprising steering angle information output means for outputting a steering wheel angle of said vehicle ear, wherein said vehicle ear locus line generation means is adapted to generates the locus line in accordance with steering angle information outputted by said steering angle information output means.

5. (Currently amended) The picture synthesizing apparatus according to claim 1 that ~~which~~ has a function of interpolating a locus line on a road surface of said vehicle ear and the locus line at the arbitrary height with a straight line or a curved line, and drawing a line vertical to said road surface on said synthesized image.

6. (Currently amended) The picture synthesizing apparatus according to claim 1 that is adapted to draw ~~which has a function of drawing~~ a locus line of a bumper and of said vehicle ear or a locus line of a vehicle ear height on said synthesized image.

7. (Previously presented) The picture synthesizing apparatus according to claim 1 which has a function of changing a color or a thickness of said locus line in accordance with a distance from said car and drawing the locus line.

8. (Currently amended) The picture synthesizing apparatus according to claim 4 ~~that which~~ has a function of drawing a section of said vehicle ear moved apart from a rear end of said vehicle ear along said locus line with an elapse of time on said synthesized image.

9. (Currently amended) The picture synthesizing apparatus according to claim 4 ~~that~~ which has a function of drawing a solid diagram of said vehicle ear moved apart from a rear end of said vehicle ear along said locus line with an elapse of time on said synthesized image.

10. (Currently amended) The picture synthesizing apparatus according to claim 4 wherein said vehicle ear locus line generation means comprises three-dimensional shape storage means, three-dimensional locus region generation means, road surface projection means, and synthesized image projection means.

11. (Currently amended) The picture synthesizing apparatus according to claim 10 wherein said three-dimensional shape storage means is adapted to store ~~stores~~ a shape of said vehicle ear.

12. (Currently amended) The picture synthesizing apparatus according to claim 10 wherein said three-dimensional shape storage means is adapted to store ~~stores~~ a shape of a rectangular parallelepiped inscribed by said vehicle ear.

13. (Currently amended) The picture synthesizing apparatus according to claim 10 wherein said three-dimensional shape storage means is adapted to store ~~stores~~ a shape of a wheel of said vehicle ear.

14. (Currently amended) The picture synthesizing apparatus according to claim 10 wherein said three-dimensional shape storage means is adapted to store ~~stores~~ a shape of a bumper of said vehicle ear.

15. (Currently amended) The picture synthesizing apparatus according to claim 4, further comprising obstacle collision prediction means for detecting an obstacle present around said vehicle ear, and predicting a possibility of collision of said vehicle ear with said obstacle.

16. (Currently amended) The picture synthesizing apparatus according to claim 15 wherein said vehicle ear locus line drawing means does not draw the locus line of said vehicle ear ahead of a collision place, when said obstacle collision prediction means predicts the collision of said vehicle ear with said obstacle.

17. (Currently amended) The picture synthesizing apparatus according to claim 15 wherein said vehicle ear locus line drawing means emphasizes

and displays a collision place, when said obstacle collision prediction means predicts the collision of said vehicle ear with said obstacle.

18. (Previously presented) The picture synthesizing apparatus according to claim 4, further comprising multi-screen generation means for displaying the image synthesized by said viewpoint change image synthesizing means in a multiplicity of divided screens.

19. (Currently amended) The picture synthesizing apparatus according to claim 18 wherein said vehicle ear locus line drawing means draws a locus of the vehicle ear in each screen generated by said multi-screen generation means.

20. (Currently amended) The picture synthesizing apparatus according to claim 18 wherein said image pickup means includes means for picking up an image behind said vehicle ear, and means for picking up an image beside said vehicle ear.

21. (Currently amended) The picture synthesizing apparatus according to claim 18 wherein said vehicle ear locus line drawing means draws a locus line of a rear end of said vehicle ear on an image beside said vehicle ear, or an image obtained by converting said image beside the vehicle ear.

22. (Currently amended) The picture synthesizing apparatus according to claim 19 wherein said vehicle ear locus line drawing means draws the

locus line or a vehicle ear frame indicating the same position in the same color in different screens, when said locus line is drawn in a plurality of screens.

23. (Currently Amended) A picture synthesizing apparatus comprising:

an image pickup means that is disposed in attached to a vehicle disposed on a road surface and is adapted to obtain an original image of a surrounding object viewed from a viewpoint of the image pickup means;

a viewpoint change image synthesizing means for changing a viewpoint of an that is adapted to produce a synthesized image, in which the surrounding object is viewed from a virtual viewpoint different from the viewpoint of the image pickup means along a direction substantially vertical to the road surface, from the original image obtained by said image pickup means and synthesizing the image and draws the synthesized image on a plane corresponding to the road surface;

an auxiliary line generation means for generating that is adapted to draw an auxiliary line of indicating an arbitrary position apart from said vehicle ear; and

an auxiliary line drawing means for drawing that is adapted to draw the auxiliary line generated by said auxiliary line generation means on the synthesized image synthesized produced by said viewpoint change image synthesizing means by projecting the auxiliary line viewed from the viewpoint of the image pickup means onto the road surface and again projecting the projected auxiliary line viewed from the virtual viewpoint onto the plane corresponding to the road surface.

24. (Previously presented) The picture synthesizing apparatus according to claim 23, further comprising multi-screen generation means for displaying the image synthesized by said viewpoint change image synthesizing means in a multiplicity of divided screens, wherein said auxiliary line drawing means draws the generated auxiliary line in each screen generated by said multi-screen generation means.

25. (Currently amended) The picture synthesizing apparatus according to claim 23 wherein said auxiliary line generation means is adapted to generate ~~generates~~ an auxiliary line indicating a position of a rear end of said vehicle ~~car~~.

26. (Currently amended) The picture synthesizing apparatus according to claim 23 wherein said auxiliary line generation means is adapted to generate ~~generates~~ an auxiliary line indicating a constant distance from a rear end of said vehicle ~~car~~.

27. (Currently amended) The picture synthesizing apparatus according to claim 23 wherein said auxiliary line generation means is adapted to generate ~~generates~~ an auxiliary line indicating a width of a general vehicle ~~car~~.

28. (Currently Amended) A The picture synthesizing apparatus according to claim 1, further comprising:

~~image pickup means disposed in a car so that a rear part of said car is~~

positioned in a view field;

~~viewpoint change image synthesizing means for changing a viewpoint of an image obtained by said image pickup means and synthesizing the image including an image of said car;~~

a storage means ~~for storing~~ that is adapted to store predetermined data beforehand; and

a drawing means ~~for superimposing~~ that is adapted to superimpose predetermined auxiliary data upon the synthesized image ~~synthesized~~ produced by said viewpoint change image synthesizing means based on the data read from said storage means,

wherein said image pickup means obtains the original image in which a rear part of said vehicle is positioned in a view field, and

wherein said viewpoint change image synthesizing means is adapted to produce the synthesized image including an image of said vehicle.

29. (Currently amended) The picture synthesizing apparatus according to claim 28 ~~which~~ that has a function of superimposing an auxiliary line upon a rear edge of said vehicle ~~car~~, and providing an image emphasizing/indicating the corresponding position.

30. (Currently amended) The picture synthesizing apparatus according to claim 28 ~~that~~ which has a function of providing an image showing a three dimensional illustration prepared as if the image of said vehicle ~~car~~ were picked up by an actually disposed image pick up unit and converted/synthesized.

31. (Currently amended) The picture synthesizing apparatus according to claim 28 ~~that which~~ has a function of representing said vehicle ear by an illustration of a skeleton or a wire frame, and providing an image explicitly indicating a tire position.

32. (Previously presented) The picture synthesizing apparatus according to claim 31 which has a function of providing an image obtained by transforming/synthesizing an image actually obtained by said image pickup means in a region corresponding to a bumper of the illustration.

33. (Currently amended) The picture synthesizing apparatus according to claim 28 ~~that which~~ has a function of superimposing an illustration of two wall surfaces disposed vertically to a road surface in a rear end position of said vehicle ear, and on an inner side of the rear end position of said vehicle ear, and having the same width as a width of said vehicle ear upon a displayed image, and providing an image metaphorically representing said vehicle ear as a solid object.

34. (Currently amended) The picture synthesizing apparatus according to claim 28 ~~that which~~ has a function of providing an image showing a mirror confirmation line behind a rear end of a bumper of said vehicle ear by a constant distance and horizontally with said bumper.

35. (Currently amended) The picture synthesizing apparatus according to claim 28 ~~that which~~ has a function of providing an image including a road

surface passage locus indicating a position obtained by projecting a position passed by a body end of said vehicle ear onto a road surface, and a bumper end passage locus indicating a position passed by a bumper end of said vehicle ear, when said vehicle ear moves backwards, and a solid auxiliary line for connecting the loci to produce a solid sense.

36. (Currently amended) The picture synthesizing apparatus according to claim 35 that ~~which~~ has a function of providing an image showing said road surface locus like a tire trace, and indicating the bumper end passage locus connected to a bumper end of an actual image or an illustration of said vehicle ear.

37. (Previously presented) The picture synthesizing apparatus according to claim 35 which has a function of providing an image showing said road surface passage locus drawn from a tire explicitly indicated in an illustration.

38. (Currently amended) The picture synthesizing apparatus according to claim 37 that ~~which~~ has a function of providing an image showing a mirror confirmation line behind a rear end of a bumper of said vehicle ear by a constant distance and horizontally with said bumper.

39. (Currently amended) The picture synthesizing apparatus according to claim 35 that ~~which~~ further comprises a locus calculation unit to calculate a predicted locus from a steering angle signal inputted from the outside, and that ~~which~~ has a function of providing an image including a road surface passage locus

corresponding to a steering angle of said vehicle ear, a bumper end passage locus corresponding to the steering angle of said vehicle ear, and a solid auxiliary line for connecting the loci to produce a solid sense.

40. (Currently amended) The picture synthesizing apparatus according to claim 28 that ~~which~~ has a function of providing an image simultaneously showing a road surface passage locus, a bumper end passage locus, a passage locus indicating a position passed by an appropriate height portion of a body of a vehicle ear, when said vehicle moves ear-moved backwards.

41. (Currently amended) The picture synthesizing apparatus according to claim 40 that ~~which~~ has a function of providing an image showing said road surface passage locus like a tire trace, and indicating said bumper end passage locus connected to a bumper end of an actual image or an illustration.

42. (Currently amended) The picture synthesizing apparatus according to claim 40 that ~~which~~ has a function of providing an image showing said road surface passage locus drawn from a tire explicitly indicated in an illustration.

43. (Currently amended) The picture synthesizing apparatus according to claim 42 that ~~which~~ has a function of providing an image showing a mirror confirmation line behind a rear end of a bumper of said vehicle ear by a constant distance and horizontally with said bumper.

44. (Currently amended) The picture synthesizing apparatus according to claim 40 that ~~which~~ further comprises a locus calculation unit to calculate a predicted locus from a steering angle signal inputted from the outside, and that ~~which~~ has a function of providing an image that is adapted to simultaneously show ~~showing~~ road surface passage locus corresponding to a steering angle of said vehicle ~~car~~, said bumper end passage locus corresponding to the steering angle of said vehicle ~~car~~, a passage locus indicating a position passed by an appropriate height portion of a body of said vehicle ~~car~~, and an illustration imitating a rear part of said vehicle ~~car~~.

45. (Currently amended) The picture synthesizing apparatus according to claim 28 that ~~which~~ has a function of providing an image simultaneously showing a road surface passage locus, a bumper upper surface locus indicating a position passed by an end of a bumper upper surface of said vehicle ~~car~~, a bumper lower surface passage locus indicating a position passed by an end of a bumper lower surface of said vehicle ~~car~~, and an illustration imitating a rear part of said vehicle ~~car~~, when said vehicle ~~car~~ moves backwards.

46. (Currently amended) The picture synthesizing apparatus according to claim 45 that ~~which~~ has a function of providing an image showing said road surface passage locus like a tire trace, and indicating the bumper end passage locus connected to a bumper end of an actual image or an illustration of the vehicle ~~car~~.

47. (Currently amended) The picture synthesizing apparatus according to claim 45 that ~~which~~ has a function of providing an image showing said

road surface passage locus drawn from a tire explicitly indicated in an illustration.

48. (Currently amended) The picture synthesizing apparatus according to claim 47 ~~that~~ ~~which~~ has a function of providing an image showing a mirror confirmation line behind a rear end of a bumper of said vehicle ear by a constant distance and horizontally with the bumper.

49. (Currently amended) The picture synthesizing apparatus according to claim 45 ~~that~~ ~~which~~ further comprises a locus calculation unit adapted to calculate a predicted locus from a steering angle signal inputted from outside, and ~~that~~ ~~which~~ has a function of providing an image simultaneously showing said road surface passage locus corresponding to the steering angle of said vehicle ear, said bumper lower surface passage locus corresponding to the steering angle of said vehicle ear, and an illustration imitating a bumper of said vehicle ear.

50. (Currently Amended) An image synthesis/display apparatus comprising:

a picture synthesizing apparatus comprising:

an image pickup means that is disposed in attached to a ear vehicle disposed on a road surface and is adapted to obtain an original image of a surrounding object viewed from a viewpoint of the image pickup means;

a viewpoint change image synthesizing means for changing a viewpoint of an that is adapted to produce a synthesized image, in which the surrounding object is viewed from a virtual viewpoint different from the viewpoint of the image pickup

means along a direction substantially normal to the road surface, from the original image obtained by said image pickup means and synthesizing the image and is adapted to draw the synthesized image on a plane corresponding to the road surface;

a vehicle ear locus line generation means for generating that is adapted to generate at least one of a locus line of said vehicle placed at an arbitrary height from the road surface of said ear and a vertical line extending vertically to the road surface; and

a vehicle ear locus line drawing means for drawing which is adapted to draw the locus or vertical line generated by said vehicle ear locus line generation means on the synthesized image synthesized produced by said viewpoint change image synthesizing means by projecting the locus or vertical line viewed from the viewpoint of the image pickup means onto the road surface and again projecting the projected locus or vertical line viewed from the virtual viewpoint onto the plane corresponding to the road surface;

a display means for displaying that is adapted to display a combined image of the image-synthesized image and an image of the locus or vertical line drawn on the plane by said picture synthesizing apparatus; and

a display data conversion means for converting that is adapted to convert said combined image to be displayed into data suitable for said display means.

51. (Currently Amended) An image synthesis/display apparatus comprising:

a picture synthesizing apparatus comprising:

an image pickup means that is disposed in attached to a ear vehicle disposed on a road surface and is adapted to obtain an original image of a surrounding object viewed

from a viewpoint of the image pickup means;

a viewpoint change image synthesizing means for changing a viewpoint of an that is adapted to produce a synthesized image, in which the surrounding object is viewed from a virtual viewpoint different from the viewpoint of the image pickup means along a direction substantially vertical to the road surface, from the original image obtained by said image pickup means and synthesizing the image and is adapted to draw the synthesized image on a plane corresponding to the road surface;

an auxiliary line generation means for generating that is adapted to generate an auxiliary line of indicating an arbitrary position apart from said vehicle ear; and

an auxiliary line drawing means for drawing that is adapted to draw the auxiliary line generated by said auxiliary line generation means on the synthesized image synthesized-produced by said viewpoint change image synthesizing means by projecting the auxiliary line viewed from the viewpoint of the image pickup means onto the road surface and also projecting the projected auxiliary line viewed from the virtual viewpoint onto the plane corresponding to the road surface;

a display means for displaying that is adapted to display the image synthesized image including the auxiliary line by said picture synthesizing apparatus; and

a display data conversion means for converting that is adapted to convert said synthesized image including the auxiliary line to be displayed into data suitable for said display means.

52. (Currently Amended) ~~An~~ The image synthesis/display apparatus ~~comprising; according to claim 50, wherein~~
a the picture synthesizing apparatus comprising further comprises:

~~image pickup means disposed in a car so that a rear part of said car is positioned in a view field;~~

~~viewpoint change image synthesizing means for changing a viewpoint of an image obtained by said image pickup means and synthesizing the image including an image of said car;~~

~~a storage means for storing that is adapted to store predetermined data beforehand; and~~

~~a drawing means for superimposing that is adapted to superimpose predetermined auxiliary data upon the synthesized image synthesized produced by said viewpoint change image synthesizing means based on the data read from said storage means;~~

~~wherein the display means for displaying is adapted to display the predetermined auxiliary data and a combined image of the image synthesized image and the image of the locus or vertical line drawn on the plane by said picture synthesizing apparatus; and~~

~~the display data conversion means for converting is adapted to convert the predetermined auxiliary data and said combined image to be displayed into data suitable for displaying on for said display means.~~

53. (Currently Amended) An image acquirement warning apparatus comprising:

detection means for detecting an approaching state of a connection object to be connected to a vehicle car, the approaching state indicating the approaching of the connection object to the vehicle;

a picture synthesizing apparatus comprising:

an image pickup means that is disposed in attached to said car and/or said connection object placed on a road surface and is adapted to obtain an original image of a surrounding object viewed from a viewpoint of the image pickup means;

a viewpoint change image synthesizing means for changing a viewpoint of an that is adapted to produce a synthesized image, in which the surrounding object is viewed from a virtual viewpoint different from the viewpoint of the image pickup means along a direction substantially normal to the road surface, from the original image obtained by said image pickup means and synthesizing the image and is adapted to draw the synthesized image on a plane corresponding to the road surface;

a vehicle ear locus line generation means for generating adapted to generate at least one of a locus line of said vehicle placed at an arbitrary height from the road surface of said ear and a vertical line extending vertically to the road surface; and

a vehicle ear locus line drawing means for drawing adapted to draw the locus or vertical line generated by said vehicle ear locus line generation means on the synthesized image synthesized-produced by said viewpoint change image synthesizing means by projecting the locus or vertical line viewed from the viewpoint of the image pickup means onto the road surface and again projecting the projected locus or vertical line viewed from the virtual viewpoint onto the plane corresponding to the road surface;
and

warning means for generating a warning signal from said approaching state obtained by said detection means and/or a relation between said car and said connection object in the image synthesized by said picture synthesizing apparatus.

54. (Currently Amended) An image acquirement warning apparatus comprising:

detection means for detecting an approaching state of a connection object to be connected to a vehicle ear, the approaching state indicating the approaching of the connection object to the car;

a picture synthesizing apparatus comprising:

an image pickup means that is disposed in attached to a vehicle placed on a road surface and obtains an original image of a surrounding object viewed from a viewpoint of the image pickup means;

a viewpoint change image synthesizing means for changing a viewpoint of an that is adapted to produce a synthesized image, in which the surrounding object is viewed from a virtual viewpoint different from the viewpoint of the image pickup means along a direction substantially vertical to the road surface, from the original image obtained by said image pickup means and synthesizing the image and is adapted to draw the synthesized image on a plane corresponding to the road surface;

an auxiliary line generation means for generating that is adapted to generate an auxiliary line of indicating an arbitrary position apart from said vehicle ear; and

an auxiliary line drawing means for drawing that is adapted to draw the auxiliary line generated by said auxiliary line generation means on the synthesized image synthesized produced by said viewpoint change image synthesizing means by projecting the auxiliary line viewed from the viewpoint of the image pickup means onto the road surface and also projecting the projected auxiliary line viewed from the virtual viewpoint onto the plane corresponding to the road surface; and

warning means for generating a warning signal from said approaching state

obtained by said detection means and/or a relation between said vehicle ~~car~~ and said connection object in the synthesized image including the auxiliary line synthesized by said picture synthesizing apparatus.

55. (Currently Amended) ~~An~~ The image acquirement warning apparatus ~~comprising~~ according to claim 53, wherein detection means for detecting an approaching state of a connection object connected to a car;
~~a~~ the picture synthesizing apparatus ~~comprising~~ further comprises:

~~image pickup means disposed in a car so that a rear part of said car is positioned in a view field;~~

~~viewpoint change image synthesizing means for changing a viewpoint of an image obtained by said image pickup means and synthesizing the image including an image of said car;~~

~~a~~ storage means ~~for storing~~ that is adapted to store predetermined data beforehand; and

~~a~~ drawing means ~~for superimposing~~ that is adapted to superimpose predetermined auxiliary data upon the synthesized image ~~synthesized~~ produced by said viewpoint change image synthesizing means based on the data read from said storage means; and

~~warning means for generating a warning signal from said approaching state obtained by said detection means and/or a relation between said car and said connection object in the image synthesized by said picture synthesizing apparatus.~~

56. (Currently amended) The image acquirement warning apparatus

according to claim 53, further comprising warning signal generation condition setting means for a user to arbitrarily set a condition for generating the warning signal by said warning means.

57. (Currently Amended) A vehicle ear position recognition apparatus comprising:

a picture synthesizing apparatus comprising:

a plurality of image pickup means that are adapted to be disposed in attached to a ear vehicle disposed on a road surface, and including includes a rear image pickup means for picking up an original image of a surrounding object behind said vehicle ear;

a viewpoint change image synthesizing means for changing a viewpoint of an that is adapted to produce a synthesized image, in which the surrounding object is viewed from a virtual viewpoint different from the viewpoint of the image pickup means along a direction substantially vertical to the road surface, from the original image obtained by said image pickup means and synthesizing the image and is adapted to draw the synthesized image on a plane corresponding to the road surface;

a vehicle ear locus line generation means for generating that is adapted to generate at least one of a locus line of said vehicle placed at an arbitrary height from the road surface of said ear and a vertical line extending vertically to the road surface; and

a vehicle ear locus line drawing means for drawing that is adapted to draw the locus or vertical line generated by said vehicle ear locus line generation means on the synthesized image synthesized produced by said viewpoint change image synthesizing means by projecting the locus or vertical line viewed from the viewpoint of the image pickup means onto the road surface and again projecting the projected locus or vertical

line viewed from the virtual viewpoint onto the plane corresponding to the road surface;

and

an image detection means for detecting that is adapted to detect an image of an arbitrary object from the original image obtained by said rear image pickup means or the synthesized image synthesized produced by said picture synthesizing apparatus;

a recognition means for recognizing that is adapted to recognize a position relation between the image detected by said image detection means and the image of said vehicle ear; and

a comparison means for comparing that is adapted to compare said position relation recognized by said recognition means with a predetermined position relation, and ~~detecting~~ is adapted to detect a deviation amount between the recognized position relations from the predetermined position relations.

58. (Currently Amended) A vehicle ear position recognition apparatus comprising:

a picture synthesizing apparatus comprising:

a plurality of image pickup means that are adapted to be disposed in attached to a vehicle ear, and ~~including~~ includes a rear image pickup means for picking up an original image of a surrounding object behind said vehicle ear, said vehicle being disposed on a road surface and is adapted to obtain a plurality of original images, respectively, viewed from a plurality of viewpoints of the image pickup means;

a viewpoint change image synthesizing means for changing a viewpoint of an image which produces a synthesized image, in which the surrounding object is viewed from a virtual viewpoint different from the viewpoint of the image pickup means along

a direction substantially normal to the road surface, from the original images obtained by said image pickup means and synthesizing the image and is adapted to draw the synthesized image on a plane corresponding to the road surface;

an auxiliary line generation means for generating that is adapted to generate an auxiliary line of indicating an arbitrary position apart from said vehicle ear; and

an auxiliary line drawing means for drawing that is adapted to draw the auxiliary line generated by said auxiliary line generation means on the synthesized image synthesized produced by said viewpoint change image synthesizing means by projecting the auxiliary line viewed from the viewpoint of the image pickup means onto the road surface and also projecting the projected auxiliary line viewed from the virtual viewpoint onto the plane corresponding to the road surface; and

an image detection means for detecting that is adapted to detect an image of an arbitrary object from the original image obtained by said rear image pickup means or the synthesized image synthesized produced by said picture synthesizing apparatus and including the auxiliary line;

a recognition means for recognizing that is adapted to recognize a position relation between the image detected by said image detection means and the image of said vehicle ear; and

a comparison means for comparing that is adapted to compare said position relation recognized by said recognition means with a predetermined position relation, and detecting detects a deviation amount between the recognized position relations from the predetermined position relations.

59. (Currently Amended) ~~An~~ The vehicle ear position recognition

apparatus ~~comprising~~ according to claim 57, wherein

~~a~~ the picture synthesizing apparatus comprising further comprises:

~~a plurality of image pickup means disposed in a car, and including rear image pickup means for picking up an image behind said car, and disposed so that a rear part of said car is positioned in a view field;~~

~~viewpoint change image synthesizing means for changing a viewpoint of an image obtained by said image pickup means and synthesizing the image including an image of said car;~~

~~a storage means for storing that is adapted to store predetermined data beforehand; and~~

~~a drawing means for superimposing that is adapted to superimpose predetermined auxiliary data upon the synthesized image synthesized produced by said viewpoint change image synthesizing means based on the data read from said storage means;~~

~~image detection means for detecting an image of an arbitrary object from the image obtained by said rear image pickup means or the image synthesized by said picture synthesizing apparatus;~~

~~recognition means for recognizing a position relation between the image detected by said image detection means and the image of said car; and~~

~~comparison means for comparing said position relation recognized by said recognition means with a predetermined position relation, and detecting a deviation amount between the position relations from the position relations~~

wherein the rear image pickup means is disposed to contain a rear part of said vehicle in the original image, the synthesized image produced by the viewpoint change image

synthesizing means includes an image the rear part of said vehicle.

Kindly add the following new claims:

60. (New) A vehicle position recognition apparatus as claimed in claim 57 wherein said vehicle is a car.

61. (New) A picture synthesizing apparatus as claimed in claim 1 wherein said vehicle is a car.

62. (New) An image synthesis/display apparatus as claimed in claim 50 wherein said vehicle is a car.

63. (New) An image acquirement warning apparatus as claimed in claim 53 wherein said vehicle is a car.